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Lesson 6: Conducting Data Quality Assessments



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Learning Objectives

1. Understand the purpose of the DQA and how to use a DQA to improve data quality
2. Know and be able to apply USAID's Data Quality criteria
3. Understand how to assess trade-offs

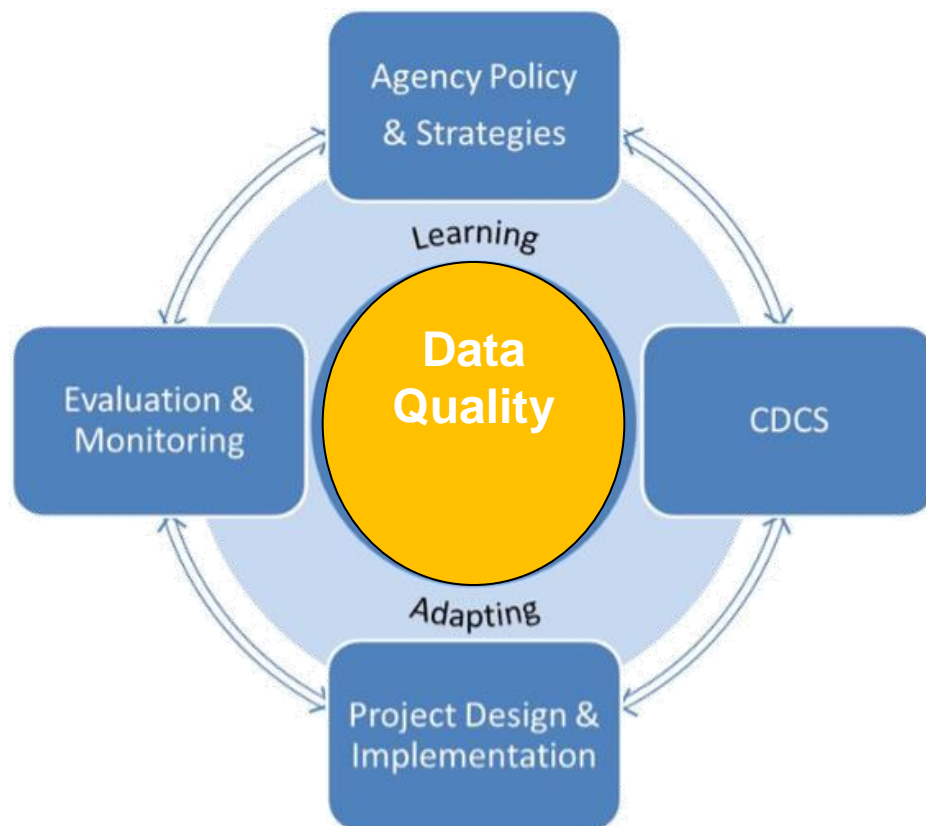


Why should we care about data quality?





USAID's Programming Cycle





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Basic Principle

Managers need to know if they can trust their data to be able to use it for making decisions





Why?

- Credibly address information needs (internal / external stakeholders, senior management, OMB, Congress)
- Ensure that program and budget decisions are well informed as is practically possible
- Support efficient use of resources
- Support the “discipline” of development
- Meet requirements of federal legislation



Purpose of the DQA

Purpose is to ensure that managers are aware of:

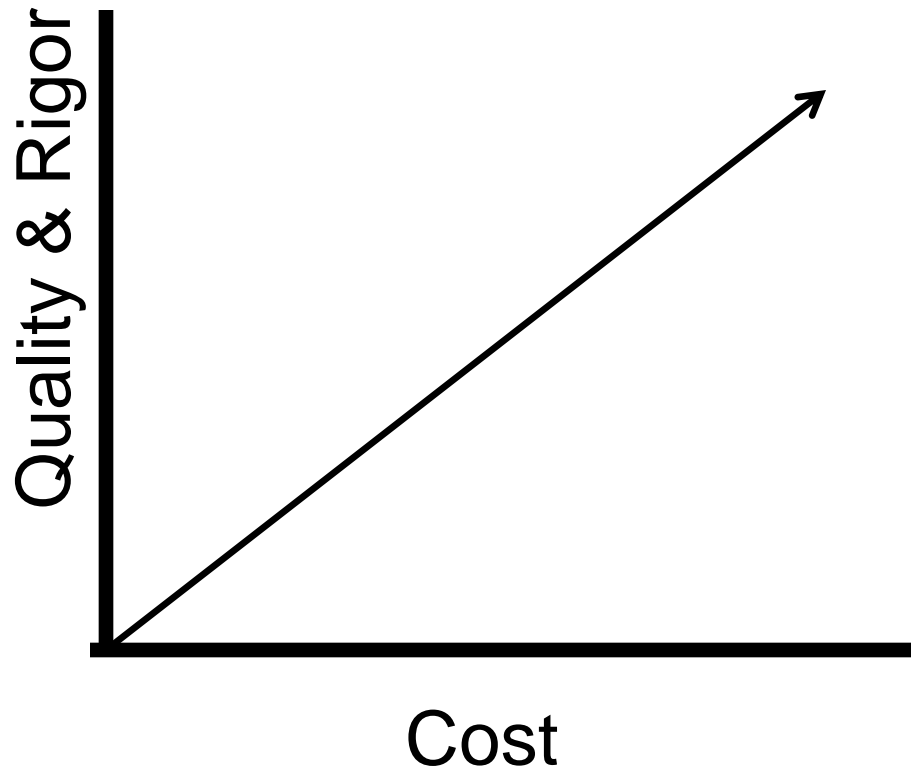
- (1) The strengths and weaknesses of the data as determined by applying the five criteria
- (2) The extent to which data integrity can be trusted to influence management decisions

Major decision point:
what level of quality is
acceptable?

ADS 203.3.11.2



Data Quality – Key Trade-Off

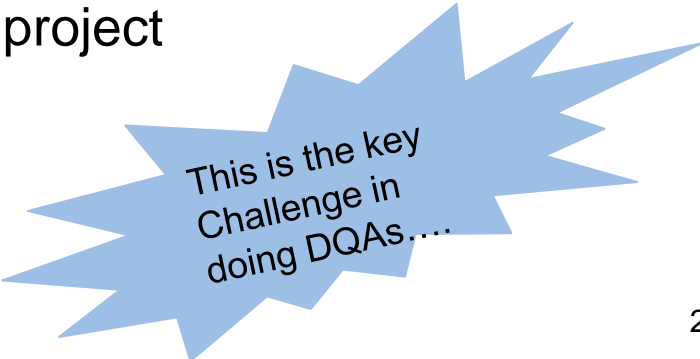




Assessing What Data Quality is Necessary....

Consider Purpose and Context:

- Purpose
 - Management versus research (not the same standard)
 - Sometimes understanding the general pace, direction, and degree of change is good enough for management
- Context
 - Core areas of intervention versus less important areas
 - Importance of the data for the project
 - Size and budget of the project
 - Time horizon



This is the key
Challenge in
doing DQAs....



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Where Does This Requirement Come From?

1. The Government Performance and Results Modernization Act (GPRAMA) of 2011

- Requires data quality assessments for indicators which are reported externally, at least every 3 years
- However, managers should be aware of the strengths and weaknesses of **all data** they use

2. Within USAID

- Joint audits revealed serious problems with data quality—numbers could not be reconstructed or supported
- Led to the DQA requirement



Who Should be Involved?

- USAID DO Teams
- Implementing Partners
- Sector specialists
- Specialists in data quality





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Approaches for Assessing Data Quality

- There is no prescribed method (ADS 203.3.11.3) → there are a range of options
- Examine data in light of the five data quality standards
- The best approach is based a number of factors:
 - Needs of the USAID Mission
 - The type of data collected
 - Importance of the data
 - Suspected data quality issues or concerns.



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Data Quality Assessments

OPTIONS

Informal Options

Conducted internally by the DO team

Ongoing (driven by emerging and specific issues)

More dependent on the DO team and individual manager's expertise & knowledge of the program

Conducted by the program manager

Product: Documented in memos, notes in the PMP

Facilitated Sessions

Draws on both management expertise and M&E expertise

Periodic & systematic

May be facilitated and coordinated by an M&E expert, but DO team members are active participants

Product: Data Quality Assessment Report

Highly Specialized

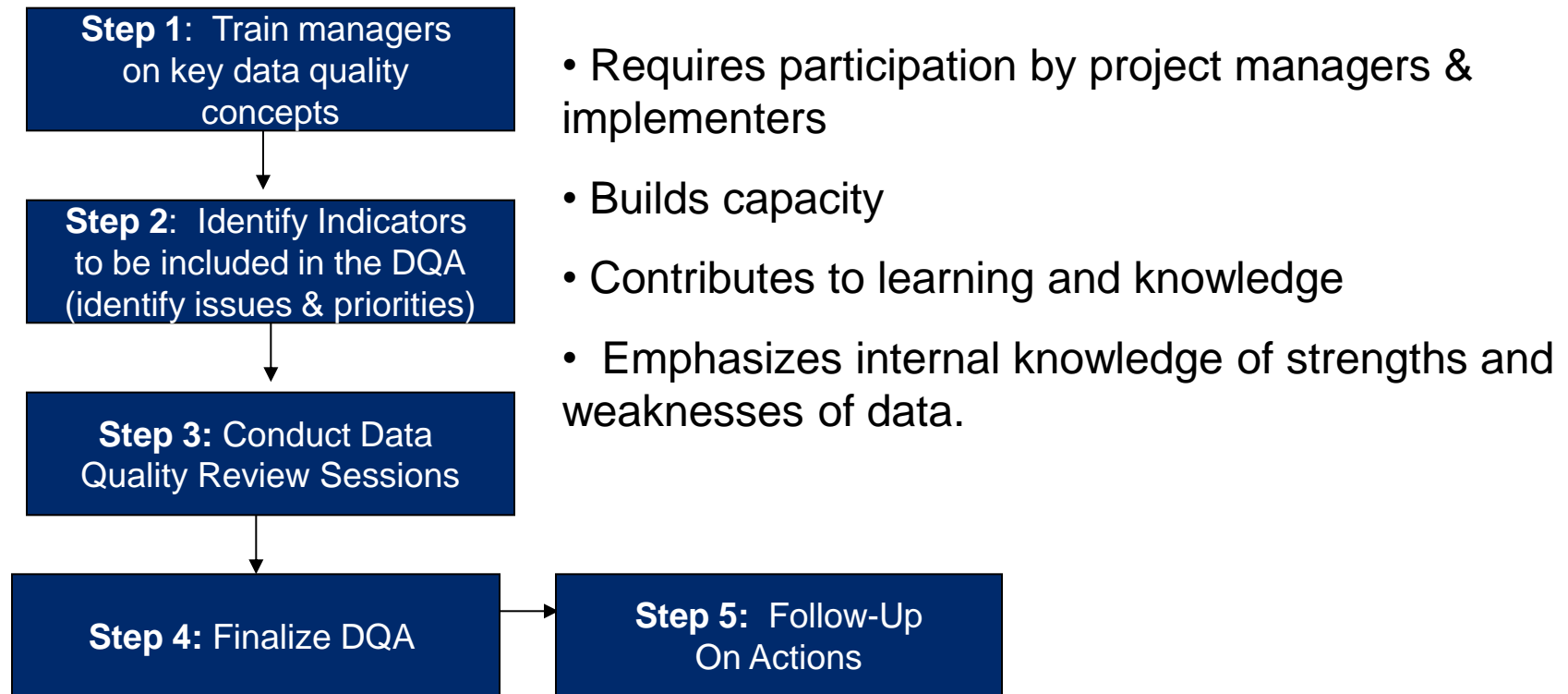
Driven by highly specialized technical needs

More dependent on specific technical depth and/or specific types of data expertise

Product: May be a Data Quality Assessment report or addressed as a part of another report



Using a Participatory Approach





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Step 1: Train Managers on DQ Concepts

1. Focus on ensuring that managers have a basic understanding of the data quality standards
2. The single biggest challenge is to be able to understand the trade offs (and what is “good enough”)





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Step 2: Identify Indicators to Be Included (including Issues and Priorities)

1. Determine requirements and needs
2. Identify issues and priorities... ask:
 - What degree of confidence do managers have?
 - Primary or secondary data?
 - Is the indicator definition clear?
 - Is the chain of data collection clear; what problems emerge?
 - What level of quality ***is sufficient*** for a particular indicator? What steps are being taken to maintain quality?
 - What steps are being taken to address limitations?
 - Are issues appropriately documented?



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Priorities

Priorities: A program should invest more time and effort in those indicators that are highest priority.

Highest priority indicators:

- All indicators used for external reporting (requirement)
- Have significant potential issues regarding data quality
- Measure progress in a major area of importance



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Step 3: Conduct Data Quality Review Sessions

1. One approach is to conduct the sessions in 2 rounds
 - Round 1-- USAID Sessions (can include IPs)
 - Focus on outcome indicators
 - Definitional issues and problems
 - Round 2-- IP Sessions – focus on
 - Greater detail particularly regarding systems and processes to collect output data
2. Use an M&E expert to facilitate the process
3. Ensure that program and project managers are included



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Use a Combination of Data Verification and a Systematic Approach

Verification of data – the reviewer follows a specific datum to its source, confirming that it has supporting documentation and is accurate—(audit approach).

Recommendation-- Select a sample of indicators to spot check in this way during site visits and through project/ activity monitoring.



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The Systematic Approach

Systems Approach– “...the DQA should examine the data in light of the five data quality standards.... *reviewing the systems and approaches for collecting data and whether they are likely to produce data of an acceptable quality over time*” (ADS 203.3.11)

Why is this a valuable approach?

- Assesses a broader set of issues that are likely to ensure data quality over time (as opposed to simply whether a number is accurate)

Example: It is accurately reported that local governments have increased revenues by 5%. However, only major urban areas have been included→ validity problem.



Step 5: Finalize the DQA

1. Documentation is critical
2. Can take various forms—
 - DQA Assessment Document
 - Worksheets or Templates
 - Memos, PIRS, etc.
3. Address data quality limitations
 - Be transparent and frank about limitations and implications for assessing performance
 - Identify clear actionable recommendations
 - Adjust, supplement, or replace problematic data
 - Triangulate—use multiple data sources, with offsetting strengths and limitations



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Step 6: Follow Up on Actions

DQAs are of little value unless DO teams respond to data limitations

1. Track and monitor the status of recommendations (e.g. via a tracking system, portfolio reviews, quarterly reports, etc).
2. Review and compare old DQAs with current ones.
3. Incorporate accountability (actions, who is responsible, etc).



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Discussion

**How can we build a
commitment
to data quality?**





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What Can I do?

- Know the standards and **engage** in the DQA process
- Set high standards at the outset- review, question, and explore the numbers
- Examine ways to build capacity for good data within host country organizations
- Use software checks and edits of data on computer systems
- Use consultative approaches to set up systems and get feedback from data users



What Can I do?

- Obtain verification by independent parties
- Spot check (field visits) or obtain verification by independent parties
- Clarify methodologies and limitations of data from secondary sources



Any other
ideas?



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What are Your Responsibilities?

- Be aware of the strengths and weaknesses of data
- Address the weaknesses of data in appropriate ways (by balancing quality and cost)
- Document data quality issues and how they are addressed in the PMP
- Report legitimate data



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Any Questions?

